

## **Abstract**

The invention discloses a virtual protection method for a fiber path. In the method, an optical port is physically divided into multiple minimum protection units. Based on the minimum protection units, a system is divided into more than one logic-system. In a logic-system, each node can work in one of four working modes: normal working mode, passing working mode, bridging working mode and switching working mode. When it is necessary to provide protection, a node is switched from normal working mode to the other three working modes through multiplex section protection, or sub-network connection protection, or channel protection etc. The invention also discloses a virtual protection device for a fiber path. With the method and the device according to the invention, not only disadvantages of the prior protection mode can be overcome, but also transmission networking can be more flexible, and this protection mode can satisfy the increasing requirements of users.